

Financing Energy Efficiency Projects for Cities, Counties, and Special Districts

Adel Suleiman
California Energy Commission



Energy Commission & Its Functions

**Energy policy and information
advisor to the California governor
and legislature**

- **Major functions:**

- License power plants
- Assess current and future energy trends
- Advance energy technologies
- Develop Buildings & Appliance Standards.
- **Promote energy efficiency and renewable energy**



Energy Commission Programs for Public Agencies

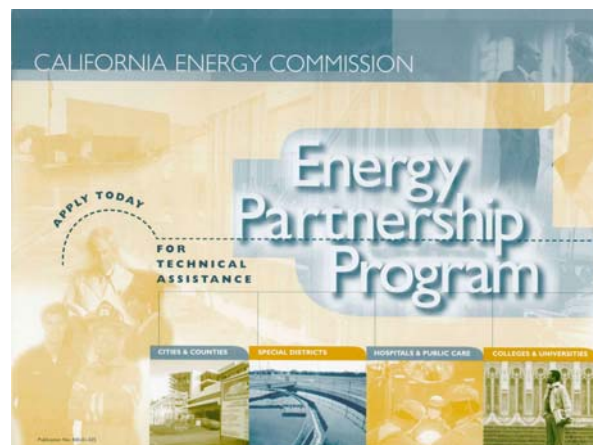
- Technical Assistance Programs to Help Identify Energy Saving Projects
 - ☑ Energy Partnership Program
 - ☑ Bright Schools Program

- Energy Project Funding
 - ☑ Can provide up to 100% of your project costs
 - ☑ Energy savings are used to repay us back for the funds that you use



Energy Partnership Program

Do you need help
identifying energy
projects?



- We can provide:
 - ☑ Comprehensive energy audits for both gas and electric systems
 - ☑ Project specific feasibility studies
 - ☑ New construction and retrofit project review assistance
 - ☑ Contractor selection and bid specification assistance
 - ☑ DOE qualified specialist to assess your steam and heating systems and provide training to maximize energy savings

Energy Commission pays up to \$20,000 of our consultant's cost



Energy Partnership Program

Partial List of So Cal Participants

- City of Los Angeles
- City of Alhambra
- City of Agoura Hills
- City of Arcadia
- City of Artesia
- City of Avalon
- City of Azusa
- City of Baldwin Park
- City of Claremont
- City of Covina
- City of West Covina
- City of Lawndale
- City of Lynwood
- City of Long Beach
- City of Malibu
- City of Pasadena
- City of San Diego
- County of San Diego
- City of Westminster
- City of Santa Fe Springs
- City of Santa Monica
- City of San Dimas



Energy Efficiency Funding Available Now: \$26 Million

- Funding for energy efficiency and self generation projects
- Interest rate is 3.95%
- Can provide up to 100% funding for projects
- Up to \$3 million per application — no minimum


EASY LOANS
No application fees, points, or hidden costs

Interest Rate
3.95%

FINANCING FOR ENERGY EFFICIENCY
& ENERGY GENERATION PROJECTS

APPLICATION

- Public Schools & Colleges
- Public Hospitals
- Local Governments
- Special Districts
- Public Care Institutions



ARNOLD SCHWARZENEGGER
Governor

California Energy Commission
<http://www.energy.ca.gov/efficiency/financing/index.html>
Phone: (916) 654-4147

CEC-400-2007-010

First come, first served



Unique Financing Features

- Simple application, no fees or points
- Technical review of each application
- Pay us back with the estimated savings from your projects
- First payment due min. 6 months after project completion and after energy cost savings are accrued
- Up to 15 years to pay us back, no penalty for paying us back early
- Funds can supplement incentives/rebates
- Loans are not collateralized or secured
- Complementary technical support available during and after project installation
- Max. Loan = Annual cost savings x 10 years



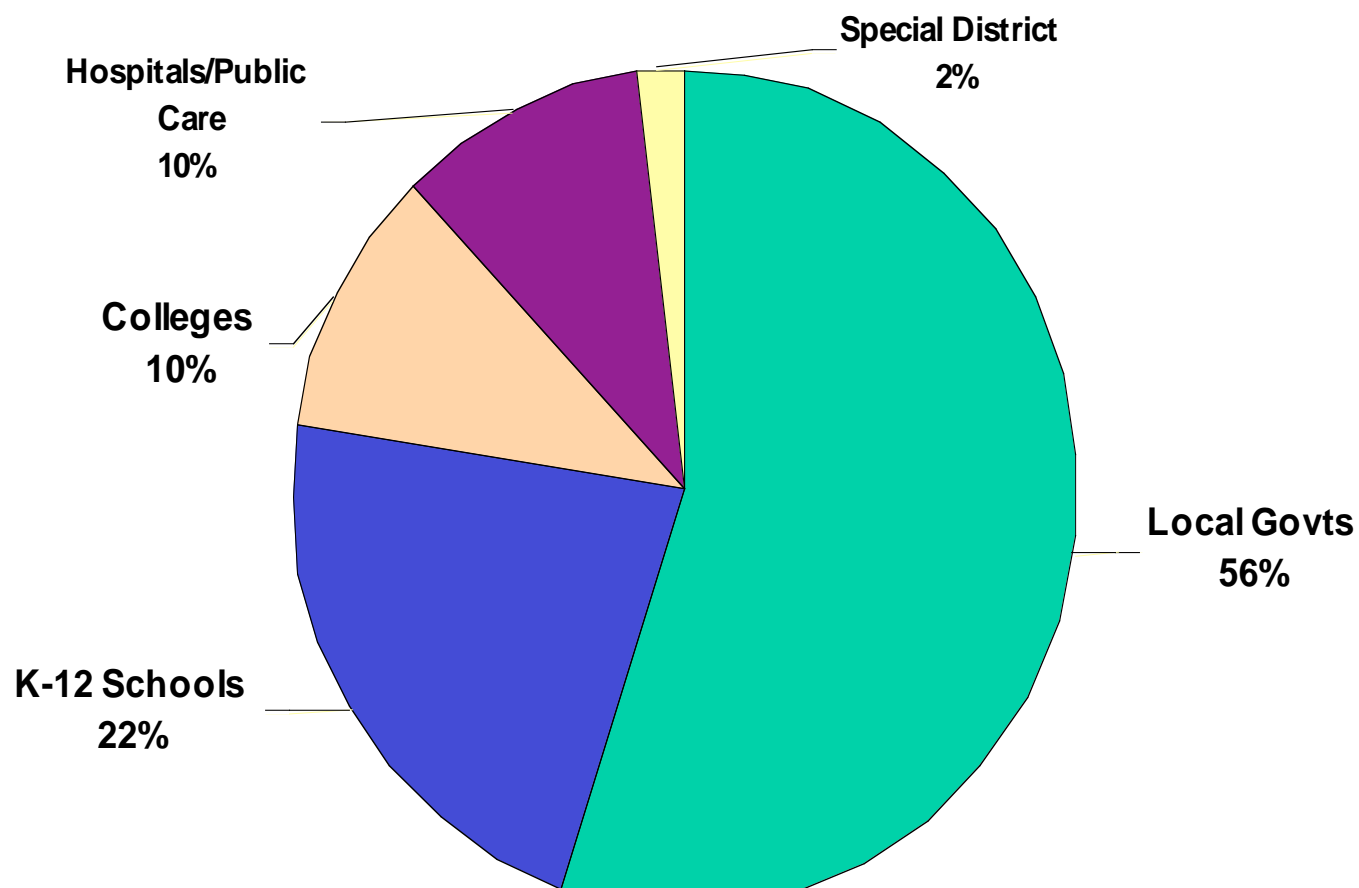
Energy Efficiency Financing

Partial List of LA and Orange County Participants

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- City of West Covina
 - City of Compton
 - City of Redondo Beach
 - City of Los Angeles
 - City of San Diego
 - City of Alhambra
 - City of Culver City
 - City of Bellflower
 - City of La Habra
 - City of Westlake Village
 - City of San Juan Capistrano
 - City of Garden Grove
 - City of Huntington Beach
 - Gateway Hospitals
 - Patton State Hospital
 - St. Joseph Health System
 - County of San Diego
 - College of the Canyons
 - Loyola Marymount University
 - Claremont Graduate University
 - Irvine Valley College
 - Mt. San Antonio College
 - Los Angeles Pierce College
 - LA unified School District
 - Torrance Unified School Dist.
 - Lowell Joint School District

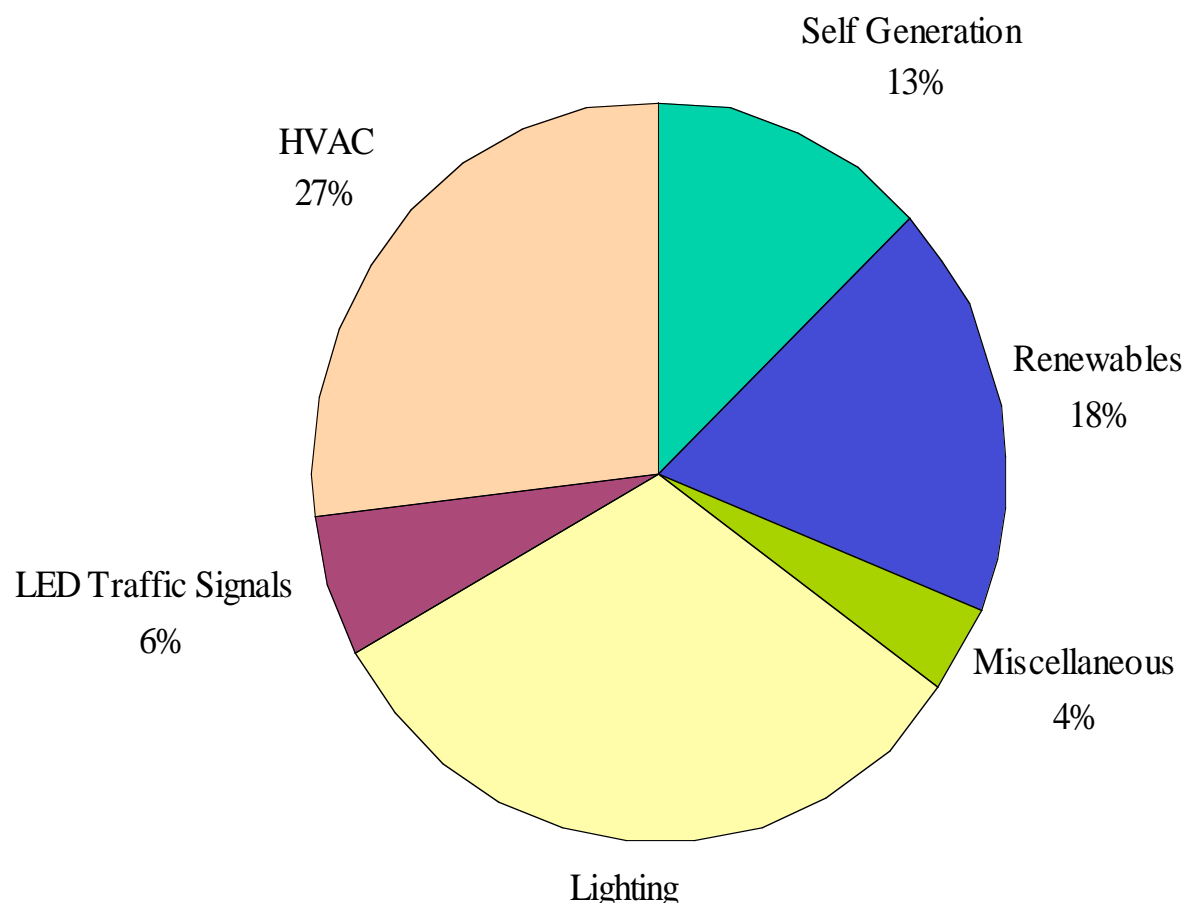


692 Recipients Have Received Loans Totaling \$185 Million



What Has Been Funded with Loans?

\$105 million in loans since 2000



City of Los Angeles

Street Light Conversion Loan

■ **Baseline conditions**

- ☑ 160 watt incandescent
(2,560 Lumens)
- ☑ Series wiring
- ☑ Electric rate includes
maintenance + electricity

■ **Upgrade**

- ☑ 55 watt induction lamps
(2,800 mean lumens)
- ☑ Parallel wiring
- ☑ Electric rate for electricity
only



4,800 street lights converted



City of San Carlos

“The indoor comfort problems at city hall have been eliminated!”

Richard Averett, Finance Director

“The CEC low interest loan program helped the city make upgrades to our city hall HVAC equipment...This new upgrade allows the city to provide a more comfortable environment for the employees and the public and also saves us money on our utility bills.”

CEC Loan: \$657,303

Annual Cost Savings: \$81,151

Simple Payback: 8.1 years



Alameda County

“We have the largest rooftop solar system in the nation!”

Matt Muniz, P.E., Energy Program Manager

“With the Energy Commission’s Energy Efficiency Financing Program we installed our 1.18 MW solar project at Santa Rita Jail. As a result we are now saving \$423,000 annually. The loan application was simple and straightforward.”

CEC Loans Totaling: \$4,214,848
Annual Cost Savings: \$423,000
Simple Payback: 4.6 years



San Francisco Installs **LED** Traffic Signals

“Our annual electricity for traffic signals has been reduced from approximately \$1.4 million a year to approximately \$400,000 a year.”

- LED traffic modules consume 80 to 90 percent less electricity.
- The old incandescent lamps were replaced annually, while most LED modules last from four to seven years. The yellow LED modules last even longer.

CEC Loans: \$3,392,216

Annual Cost Savings: \$1,000,000

Simple Payback: 3.4 years



Simple Application Process

■ Complete one page application

- ✓ If you already have a feasibility study, attach it with your application.
- ✓ If you don't have a study, contact us for assistance in identifying projects.

■ Governing body resolution can come later



When Will Funds Be Available?

- **Applications can be approved in approx. 6 weeks**
- Expenses can be incurred after CEC approval
- CEC pays invoices on a reimbursement basis
 - ☑ Contractor/vendor invoices plus proof of payment
 - ☑ Quarterly Progress Report
 - ☑ Invoices are paid within 4-6 weeks, funds can be wired for quicker payout



Maximize Your Funding

Question: We want to replace our heating and cooling system, but it has a long payback. How can we maximize the funding from the CEC?

Answer: Package it with other energy efficiency measures so that the overall payback is as close to 10 years as possible. We can help identify projects to maximize your cost savings, such as:

- ☑ Lighting
- ☑ Heating and cooling system improvements
- ☑ Equipment controls
- ☑ Motor replacement



Putting the Package Together

Project	Annual Cost Savings	Project Cost	Simple Payback (yrs)
Lighting Retrofits	\$30,000	\$150,000	5
Mechanical Controls	\$6,000	\$30,000	5
Vending Machine Controls	\$1,300	\$1,300	1
Chiller Replacement	\$10,000	\$200,000	20
Total	\$47,300	\$381,300	8

CEC Funding for efficiency package = up to \$381,300

CEC Funding if chiller was only project funded = \$100,000



Funding for Photovoltaic Systems

Question: Can we get funding for a photovoltaic system?

Answer: Yes, but to maximize our funding, package it with other energy efficiency measures so that the overall payback is as close to 10 years as possible. We can help identify projects to maximize your cost savings.



Funding for Photovoltaics

Project	Annual Cost Savings	Project Cost	Simple Payback (yrs)
Lighting Retrofits	\$30,000	\$150,000	5
Mechanical Controls	\$6,000	\$30,000	5
Vending Machine Controls	\$1,300	\$1,300	1
50 kW (AC) PV System	\$9,000	\$425,000	47
Total	\$46,300	\$606,300	13

CEC Funding for efficiency package = up to \$463,000

CEC Funding if PV was only project funded = \$90,000



Use Our Own versus CEC Funds?

Question: We only have budget for some of the projects. Should we budget for the additional projects in future years or use CEC funding to get the projects done now?

Answer: You will save more money if you do the projects now rather than wait for budgeted funds. If your projects have a 4 year payback, the internal rate of return is about 25 percent. At a loan interest rate of 3.95 percent, you'll be earning 16 percent on your energy project investments!



CEC Funds Versus Our Own Funds

Project Assumptions:

Project Cost = \$400,000

Annual Cost Savings = \$100,000

CEC funds = \$400,000 at 3.95% interest rate

With CEC Funding:

Savings = \$100,000/yr

Interest payment (avg) = \$12,300/yr

Net savings = \$87,700/yr

Net savings in 5 yrs = \$438,500

With Own Funding Budgeted 2 years later

Years 1-2 = -\$200,000

Years 3-5 savings = \$300,000

Net savings in 5 yrs = \$100,000



Benefits of Retrofitting Your Facilities NOW!

- Energy costs are increasing about the rate of inflation (conservatively 3% per year)
- Utility Incentives are available
- Cut energy cost & update your equipment
- Reduce maintenance costs and downtime
- Improve your work environment
- Reduce harmful emissions/ carbon foot-print
- CEC project assistance and funding available

We're ready to help you get started



Websites

- **Energy Efficiency Financing Program**
 - www.energy.ca.gov/efficiency/financing
- **Energy Partnership Program**
 - www.energy.ca.gov/efficiency/partnership
- **Bright Schools Program**
 - www.energy.ca.gov/efficiency/brightschoools
- **Solar Projects**
 - www.gosolarcalifornia.ca.gov



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